

**IN THE CLAIMS**

1 (Currently Amended). A method comprising:

determining ~~an identifying a first and a second non-zero amount of dispersion in an optical system; and~~

~~applying an amount of stress to an optical medium to provide a dispersion compensation for the determined to said first non-zero amount of dispersion; and~~

~~variably tuning the stress to compensate for said second amount of non-zero dispersion.~~

2 (Original). The method of claim 1 including applying stress to an optical medium including a photoelastic medium to generate a corrective dispersion of the opposite polarity of a dispersion induced in the optical medium.

3 (Original). The method of claim 2 including using a piezoelectric device to generate stress in an optical medium.

4 (Original). The method of claim 3 including controlling the amount of stress and thereby the desired dispersion compensation by controlling the voltage applied to said piezoelectric device.

5 (Original). The method of claim 4 including securing the photoelastic medium to said piezoelectric device and passing an optical signal through said photoelastic medium.

6 (Currently Amended). A method comprising:

securing a photoelastic medium to a piezoelectric device; and

determining an amount of dispersion in an optical system;

determining an amount of stress to provide compensation for the determined amount of dispersion;

variably applying a tunable voltage to the piezoelectric device to induce a tunable said stress in said photoelastic medium appropriate to tunably correct the determined dispersion generated in an said optical system coupled to said photoelastic medium.

7 (Original). The method of claim 6 including controlling the voltage applied to said piezoelectric device to generate a dispersion of a polarity opposite to the polarity of a dispersion generated in said optical system.

8 (Original). The method of claim 7 including generating a corrective dispersion of substantially the same magnitude as the dispersion generated in said optical system.

9 (Currently Amended). An optical system comprising:

an optical medium defining an optical path;  
a photoelastic material in said optical path; and  
a device to tunably stress said photoelastic medium to variably generate a dispersion of an appropriate polarity and magnitude to correct a determined amount of dispersion induced in said optical medium.

10 (Original). The system of claim 9 wherein said device is a piezoelectric actuator.

11 (Original). The system of claim 10 including a voltage source to control the amount of voltage applied to said piezoelectric actuator to enable tuning of the dispersion applied through said photoelastic medium.

12 (Currently Amended). An optical system comprising:

an optical medium defining an optical path;  
a photoelastic material in said optical path; and  
a tunable piezoelectric device coupled to said photoelastic material to determine a variable amount of variably apply stress needed to tunably correct varying levels of dispersion in said medium compensate a determined amount of dispersion in said medium.

13 (Original). The system of claim 12 wherein said piezoelectric actuator is secured to said photoelastic medium.

14 (Original). The system of claim 13 including a voltage source to controllably apply potential to said piezoelectric actuator.

15 (Original). The system of claim 14 to provide a tunable magnitude and polarity of dispersion to cancel dispersion generated along said optical path by said optical medium.